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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/070,300 | 06/14/2002 | Vitale Bruzzo | 16791-2 | 4542 |

7590 07/12/2004

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EXAMINER

JIANG, CHEN WEN

ART UNIT PAPER NUMBER

3744

DATE MAILED: 07/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------|----------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/070,300 | BRUZZO, VITALE | |
| | Examiner | Art Unit | |
| | Chen-Wen Jiang | 3744 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7 and 9-12 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lau et al. (U.S. Patent Number 5,372,013 and 5,937,660) in view of Bawel (U.S. Patent Number 3,750,419), and vice versa

In regard to claim 7 and 11, Lau et al. disclose a quick cooling air conditioning system during startup as shown in the Fig.2. The system comprises a compressor 201, a condenser 202, a refrigerant reservoir 205, a valve at the upstream of the reservoir 206, a valve at the downstream of the reservoir 207, an optional valve 208, an expansion valve 203 and an evaporator 204. In operation, valves 206 and 207 are open and valve 208 is closed. When the compressor is turned off, the valves 206 and 207 are closed. *When controller 209 determines that it is time to turn off compressor 201*, the valves along with the compressor must be properly synchronized. First, valve 207 is closed thereby stopping the flow of refrigerant from refrigerant reservoir 205. Next, compressor 201 is turned off. As compressor is turned off, controller 209 closes valve 206. *When controller 209 determines that compressor 201 must be re-started*, again compressor 201 and valves must be properly sequenced. In the preferred embodiment, controller 209 first closes valve 208 if it is installed. Next, compressor 201 is started. Controller 209 then opens valve 207 thereby allowing the refrigerant stored in refrigerant reservoir 205 to provide an immediate

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cooling effect. Next, valve 206 is opened. *It may be necessary to delay the switching of valves 206-208 to allow the compressor to come up to speed first*, thereby reducing start-up stress on compressor 201. However, Lau et al. disclose the compression refrigeration system and do not disclose the absorption refrigeration system. Both compression refrigeration and absorption refrigeration are well known refrigeration system, e.g., Bawel discloses the absorption system to allow refrigerant saturate the evaporator in the same field of endeavor for the purpose quick startup. Lau et al. disclose the same start-up problem and provide the solution disclosed in the Application. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Lau et al. using on the absorption system in view of Bawel so as to have a quick startup.

In regard to claim 9, Lau ('013) discloses the reservoir 205 and valves 206-208 could all be manufactured into a single component.

In regard to claim 12, Lau ('660) discloses the sequence of turn off compressor. First, valve 207 is closed thereby stopping the flow of refrigerant from refrigerant reservoir 205. Next, compressor 201 is turned off. As compressor is turned off, controller 209 closes valve 206.

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lau et al. and Bawel as applied to claims 7,9,11 and 12 above, and further in view of Zimmern (U.S. Patent Number 4,509,341) or Giacometti et al. (U.S. Patent Number 5,351,504).

Lau et al. and Bawel disclose the invention substantially as claimed. However, Lau et al. and Bawel do not disclose electrovalve. Zimmern and Giacometti et al. disclose electrovalve in the same field of endeavor for the purpose of control refrigerant. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the

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apparatus of Lau et al. and Bawel with an electrovalve in view of Zimmern and Giacometti so as to control the refrigerant flow.

Allowable Subject Matter

4. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chen-Wen Jiang whose telephone number is (703) 308-0275.

The examiner can normally be reached on Tuesday-Friday from 7:00 to 5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Denise Esquivel can be reached on (703) 308-2597. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chen-Wen Jiang
Primary Examiner

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke, positioned to the right of the name and title.